



UNITED STATES PATENT AND TRADEMARK OFFICE



UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,187	04/13/2004	Jeffrey R. Thomas	12364.01/YOD ITWO:0022--I	4047
7590	04/19/2005		EXAMINER	
Patrick S. Yoder FLETCHER YODER P.O. BOX 692289 Houston, TX 77269-2289			LEUNG, PHILIP H	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/823,187	Applicant(s) THOMAS ET AL.	
	Examiner Philip H Leung	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 13-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 13-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4-13-2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election without traverse of Claims 1-9 and 13-22, in the reply filed on 1-14-2005 is acknowledged. It is confirmed that Claims 1-9 and Claims 13-22 are properly grouped as a single invention as the heating cable of claims 1-9 is similar to the heating device of claims 13-22.

2. The non-elected claims 10-12 have been cancelled.

3. The drawings filed 4-13-2004 are acceptable.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 3742

5. Claims 1-5, 9, 13-14 and 16-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haldeman (US 5,461,215) (cited by applicant), in view of Moesta (US 1,548,204).

Haldeman shows a flexible fluid-cooled induction heating cable comprising: a litz wire 10 disposed within a hollow interior of the fluid-cooled induction heating cable 1; a first and a second electrical connector 2, each electrical connector being electrically coupled to the litz wire and a first and a second fluid connector 22 (see Figures 4-9 and col. 4, line 33 – col. 5, line 20). It differs in that the fluid connector is not separate from each electrical connector. Moesta shows that it is notoriously old and well known in the art of electric heating devices supplied with a flexible power cable 15 that includes a flexible conductor 11 connected to terminals 10 and 12 and fluid connectors 14 for cooling fluid to cool the conductors 11. The fluid T-connectors 14 are separate from the electrical terminals 10 and 12 (see Figures 1-3 and page 1, line 90 – page 2, line 44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Haldeman to use fluid connectors separate from the electrical connectors for a safer device, in view of the teaching of Moesta. In regard to claims 5 and 9, pipes 17 and 20 are claimed jumper hose.

6. Claims 6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haldeman (US 5,461,215) (cited by applicant), in view of Moesta (US 1,548,204), as applied to claims 1-5, 9, 13-14 and 16-24 above, and further in view of Emerson et al (US 3,674,971).

Haldeman combined with Moesta shows a flexible fluid-cooled induction heating cable including every feature as claimed except for the explicit showing that the fluid connector is a quick-disconnect type. Emerson shows an induction heating coil 10 with cooling manifold 14

Art Unit: 3742

connected to the coil with hoses 17 and 18 with quick dis-connect fittings 20 (see Figures 1 and 2 and col. 1, lines 50-72). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Haldeman to use quick disconnect fluid connectors so that it can be quickly and easily connected or removed for a faster operation, in view of the teaching of Emerson.

7. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haldeman (US 5,461,215) (cited by applicant), in view of Moesta (US 1,548,204) and Emerson et al (US 3,674,971), as applied to claims 6 and 15 above, and further in view of Strickland, Jr. (US 2,457,843) (cited by the applicant).

Haldeman combined with Moesta and Emerson shows a flexible fluid-cooled induction heating cable including every feature as claimed except for the explicit showing that the cable is flexible enough to be able for wrapping around a pipe. However, such limitation is only an intended use statement and adds little patentable weight to the claimed structure. Anyway, Strickland, Jr. shows a flexible an induction heating cable 5 which is able to wrap around a tube 2 for heating (see Figure 1 and col. 1, lines 46-51). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Haldeman to use its flexible induction heating cable to heat any suitable workpieces including a pipe by wrapping it around the pipe to increase its utilities, in view of the teaching of Emerson.

Art Unit: 3742

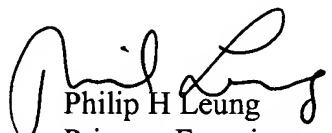
8. The prior art made of record below is considered pertinent to applicant's disclosure:

Matsumoto (2,261,742) and Stein et al (US 3,311,732) are further cited to show electrical cables with similar claimed features.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H Leung whose telephone number is (571) 272-4782. The examiner can normally be reached on flexible.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Philip H Leung
Primary Examiner
Art Unit 3742

P.Leung/pl
4-15-2005